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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,434	03/28/2001	Koji Fujiyama	4970/OJ035	1759

7590 10/28/2004

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,434

Applicant(s)

FUJIYAMA, KOJI

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8-17-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4 are pending for the examination.

RCE STATUS

2. The request filed on 9-30-04 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

NOTES/REMARKS

3. The Applicants are strongly urged to present claims again with their remarks [even if they are not changed at all], so as not to receive notice of non-responsive. In case of no change simply write "unchanged" in the bracket after the claims.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nomiyama et al., US. patent 5,331,615 (hereafter Nomiyama) in view of Yamada et al., US. patent 5,331,615.

As to claim 1, Nomiyama discloses the invention as claimed [see Figs. 1, 7-8 & 11-12] including Controlling means and transfer function holding means, comprising:

Controlling means for performing seek control [fig. 7-8 seek coil 5] for moving said optical pickup to a target track on the optical disc [fig. 1, unit d] and focus servo control [fig. 7-8 focus adjusting member (p)] of said optical pickup according to a detected focus error signal and a transfer function [col. 10, lines 14-66]; and

[a] transfer function holding means [inherently present, when transfer function is generated] for holding a first transfer function for executing focus servo as a function of the seek control [col. 9, lines 10-52].

Nomiyama discloses all of the above elements, including an optical recording/reproducing apparatus and associated details. Nomiyama also discloses a transfer function to control focus adjusting in response to a seek drive signal. Nomiyama does not specifically disclose executing focus servo when the controlling means does not perform said seek control, and a second transfer function for executing focus servo when the controlling means performs the seek control.

However, one of ordinary skill in the art at the time of invention would have realized that changing of transfer function during tracking control [as Nomiyama is doing] may cause amplification of transient control errors in his system. And these amplified control errors would have to be compensated.

Also Yamada clearly discloses:

A first transfer function for executing focus servo when said controlling means does not perform said seek control, and a second transfer function for executing focus servo when said controlling means performs the seek control [col. 6, line 60 to col. 7, line 5].

Both Nomiyama and Yamada are interested in improving the focus and seek operation in an optical disk device. Both show schemes to control for the seek control and focus control.

One of ordinary skill in the art at the time of invention would have realized that in system of Nomiyama when transfer function is changed during the tracking control operation, transient control errors are amplified.

Therefore, it would have been obvious to have used controlling operation of making tracking control temporarily inactive during seek operation in the system of Nomiyama as taught by Yamada because one would be motivated to avoid or eliminate the transient control error that are associated with this kind of operation.

NOTE: control units inherently have memory to hold commands and data.

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5. As to claim 3, it is rejected for similar reasons set forth in the rejection of claim 1, supra. As to the added limitation Nomiyama discloses:

an optical pickup for writing data on an optical disc and/or reading data from the optical disc [col. 8, lines 19-20 also fig. 1].

6. Claims 2 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nomiyama & Yamada as applied to claims 1 & 3 above, and further in view of Janssen US. patent 4,037,252 (hereafter Janssen).

As to claim 2, Nomiyama & Yamada discloses all of the above elements, including the transfer function holding means. Nomiyama & Yamada does not specifically disclose that the second transfer function has a smaller gain than the first transfer function and equivalent phase margin for similar stability of first function.

However, it is well known in the art that transfer function can be adjust depending upon the system requirement and reducing gain always provide a better stability in the phase margin. Also Janssen clearly discloses:

the second transfer function has a smaller gain than the said first transfer function and a phase margin capable of providing substantially same stability as that obtained by said first transfer function [col. 7, line 54 to col. 8, line 11] . Both Yamada and Janssen are interested in providing stable tracking in a disc shaped recording carrier and improving servo system under different conditions.

One of ordinary skill in the art at the time of invention would have realized that external disturbances routinely plague the systems and therefore the scanning point need to be set at a stable setting during external disturbances when they happen.

Therefore, it would have been obvious to have provided a transfer function stability criteria of having gain of second transfer function smaller than the first one in the system of Nomiyama & Yamada as taught by Janssen because one would be motivated to reduce noise in the system of Nomiyama & Yamada by providing a damped oscillation during occurrence of an external disturbance and also transfer function can be varied during this periods [col. 8, lines 1-11; Janssen].

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NOTE: Stable and unstable range are equivalent of performing and not performing seek control.

7. As to claim 4, it is rejected for the same reasons set forth in the rejection of claim 2, supra.

NOTE: Yamada and Janssen were presented in previous actions.

8. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new grounds of rejection.

Other prior art cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Bates et al. (US. Patent 5,768,228) "Method and system for ..".

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Primary Examiner
Group Art Unit 2655

GAUTAM R. PATEL
PRIMARY EXAMINER

October, 23 2004